Healthy BMI levels, physical activity linked to endometrial cancer survival

Yale UniversityYale University

Higher body mass index (BMI) and physical inactivity are associated with more than a two-fold increase in risk for mortality among women with endometrial cancer, new research by the Yale School of Public Health [1] has found. The study appears in the current issue of the Journal of the National Cancer Institute.

While BMI and physical inactivity have previously been linked with the development of endometrial cancer, the relationships with cancer survival have not been fully researched.

The researchers investigated BMI and physical activity in relation to 5- and 10-year survival among 1,400 women diagnosed with endometrial cancer, which affects the lining of the uterus.

Compared to patients with a BMI ranging from 18.5 to 24.9 (a range which is considered healthy), endometrial cancer patients with a BMI ranging from 25 to 29.9 were 74 percent more likely to die within five years of diagnosis. The mortality rate increased to 84 percent for women with a BMI of 30 to 34.9 and to 135 percent for BMI greater than or equal to 35. The study also found that regardless of BMI, women who engaged in greater than seven hours per week of moderate to vigorous physical activity before diagnosis had an approximate 36 percent reduction in five-year mortality rates compared to women who never or rarely exercised.

“This study provides new evidence that a healthy body mass index and higher physical activity levels are associated with better endometrial cancer survival,” said lead researcher Hannah Arem, a doctoral candidate at the School of Public Health and a pre-doctoral research fellow in the Division of Cancer Epidemiology and Genetics at the National Cancer Institute in Bethesda. “While all women are encouraged to maintain a healthy body weight and to exercise, women at high risk of endometrial cancer may be particularly motivated by these findings.”

Although more research is needed to fully understand the underlying biological mechanisms, obesity and physical activity may affect tumor progression through insulin resistance, circulating hormone levels and inflammation.

Endometrial cancer rates in the United States are increasing, and women surviving endometrial cancer make up the second largest group of female cancer survivors. About 42,000 women are diagnosed with the disease each year and nearly 8,000 die from it.

The 10-person investigative team included other scientists from the School of Public Health, the National Cancer Institute and the Yale Cancer Center.

The research was supported by a Yale-National Cancer Institute predoctoral training grant (t32 CA105666) and by the Intramural Research Program of the National Cancer Institute at the National Institutes of Health.

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[1] http://publichealth.yale.edu/index.aspx